DISFIGURE-RESISTANT PLASTIC-STRING MAT

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates to a mat, particularly to a disfigure-resistant mat made of plastic string.

2. Description of the Prior Art

Mats are commonly placed at the entrance or the doors of living houses or public buildings, for scraping off dirt, mud or water stuck under shoes by friction between the mats and shoes, so inner floors may not be smeared.

A conventional plastic-string mat 10 is shown in Fig. 1, made of high-molecule plastic elastic slender strings 11 randomly and irregularly interlocking and intercrossing with one another. It has countless gaps 12 formed among them. Therefore, the plastic slender strings 11 may produce friction force to effectively scrape dirt, mud or water adhered on the bottom of shoes worn by people, and dirt, mud or water may drop down through the gaps 12 among the plastic strings 11 to the ground where the mat is placed. Then the upper surface of the mat 10 does not have dirt, mud or water remained thereon. Thus the surface of a mat is not liable to be smeared, kept always clean dry so that it may be serviceable for a long term, durable in any kind of climate, and with frequent use.

However, as the conventional plastic-string mat is made of plastic, which is generally contractible, it may shrink to smaller size than its normal one and does not cover the area it needs to. Further, the interlocking and intercrossing plastic strings may produce looseness and elasticity to lower is counter tension force, and once the plastic strings 11 are pulled with a force sufficient to snap, it is not suitable for washing in a washing machine, but has to washed manually and carefully.

SUMMARY OF THE INVENTION

The purpose of the invention is to offer a disfigure-resistant plastic-string mat consisting of a scraping layer and a lattice-shaped net layer fused together and a non-shrinkable characteristic and good counter tension force.

The feature of the invention is a scraping layer made of high-molecule plastic strings randomly, irregularly piled up, interlocking and intercrossing with one another to form countless gaps. Another feature is a lattice-shaped net layer woven with a fiber and fused under the scraping layer. The lattice-shape net layer is homogenous material and fused together with the scraping layer by immersing the two layers in a plastic solution under a high temperature and then cooling.

BRIEF DESCRIPTION OF THE DRAWINGS

This invention will be better understood by referring to the accompanying drawings, wherein:

Figure 1 is a perspective view of a conventional plastic-string mat;

Figure 2 is an exploded view of a first embodiment of a disfigure-resistant plastic-string mat in the present invention;

Figure 3 is a cross-sectional view of the first embodiment of a disfigure-resistant plastic-string mat in the present invention; and

Figure 4 is a cross-sectional view of the second embodiment of a disfigure-resistant plastic-string mat in the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

A first embodiment of a disfigure-resistant plastic-string mat in the present invention, as shown in Figs. 2 and 3, includes a scraping layer 20 and a lattice-shaped net layer 30.

The scraping layer 20 has a certain thickness, made of high-molecule plastic elastic strings 21 under high temperature and high pressure and cooling, and the plastic strings are formed into countless rings piled up randomly, interlocking and intercrossing with one another and naturally defining countless gaps 22 among them.

The lattice-shaped net layer 30 is woven with strong PET fiber and fused under the scraping layer 20 under high temperature, having a strength as strong as in the scope of 500 - 10,000 N/m, and its surface immersed in plastic solution 32 homogenous with the scraping layer 20 so that the lattice-shaped net layer 30 may fuse with the scraping layer 20 under the temperature and then cooled to combine the lattice-shaped net layer 30 with the scraping layer 20, without need of using adhesive.

Since the lattice-shaped net layer 30 is made of plastic fiber 31 of high strength and lower tensibility, it may constrict the scraping layer 20 not to shrink or lengthen or disfigure, as it should be otherwise, because of tight fusion of the two layers 20, 30. The elastic strings 21 of the scraping layer 20 would not lengthen or snap, even the mat should be washed in a large washing machine.

Further, a second embodiment of the disfigure-resistant plastic-string mat is shown in Fig. 4, in which a cushion layer 40 is added to be adhered under the lattice-shaped net layer 30, preventing the mat from slipping.

In short, the mat according to the present invention is formed with the scraping layer and the lattice-shaped net layer fused under the scraping layer, provided with advantages of not easily shrinkable and excellent counter tensibility making it washable in a washing machine.

While the preferred embodiment of the invention has been described above, it will be recognized and understood that various modifications may be made therein and the appended claims are intended to cover all such modifications that may fall within the spirit and scope of the invention.